

### **REMARKS**

The applicant respectfully requests reconsideration in view of the following remarks.

Support for amended claims 1 and 8 can be found in the original claims 1 and 8. The applicant has deleted “carbazole” from claims 1 and 8. The applicant has deleted the term “N-alkylcarbazole” in the definition of Ar in claim 9 and added it to the definition of Ar in claim 1. No new matter has been added.

Claims 1, 4, 5, 8, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/45466 A1 (Kamatani ‘466.), US 2003/0059646 A1 is relied upon as the English language translation. Claims 1, 4, 5, 8-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/44189 (Kamatani ‘189). Claims 1, 4, 5, 8-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/066552 A1 (Burn). Claims 1, 4, 5, 8-10, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2001/0019782 A1 (Igarashi). Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamatani ‘466. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamatani ‘189. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burn. The applicant respectfully traverses these rejections.

At pages 8-11 of the Office Action, the Examiner comments on the applicant’s previous response. In particular, the Examiner has acknowledged that the applicant deleted carbazole from claim 9, however, the Examiner asserts that “carbazole” is still present in claims 1 and 8. The applicant has deleted “carbazole” from claims 1 and 8.

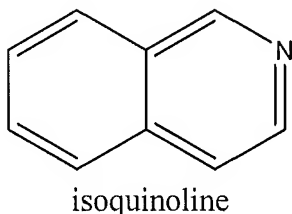
#### **Rejections Over Kamatani ‘466**

Claims 1, 4, 5, 8, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamatani ‘466. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Kamatani '466. It is noted that the Examiner has not rejected claim 9 over this reference. The applicant has deleted the term "carbazole" from claims 1 and 8. It is noted that claim 1 can have that Ar is N-alkylcarbazole which is not taught by Kamatani '466. Again, the Examiner recognized this by not rejecting claim 9. For the above reasons, these rejections should be withdrawn.

### **Rejection Over Kamatani '189**

Claims 1, 4, 5, 8-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamatani '189. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamatani '189. Kamatani '189 discloses ortho-metalated iridium complexes with phenyl-isoquinoline ligands, which are substituted by phenyl, naphthyl or fluorenyl groups. The ligand of the inventive compounds can bind to the iridium via a pyridine ring, whereas the ligand in Kamatani has an isoquinoline ring. An isoquinoline ligand is not embraced by the claims of the pending application. An isoquinoline structure is as follows:



To form an isoquinoline ring, the pyridyl ring would have to be substituted with two groups R wherein each group R has to be -CH=CH- and the two groups R would have to form a ring with each other. However, the applicant has deleted the phrase "where a plurality of substituents R, either on the same ring or on the two different rings, may together form a further monocyclic or

polycyclic ring system” from claim 1. The possibility of forming an isoquinoline ring has been deleted from the claims. The compounds according to the claims of the present invention are therefore novel with respect to Kamatani. For the above reasons these rejections should be withdrawn.

### **Rejection Over Burn**

Claims 1, 4, 5, 8-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Burn. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burn. In order to overcome these rejections, the applicant has deleted the terphenylene groups from the definition of Ar in claims 1 and 8 and deleted the aryl group from the definition of Q in claim 1. Burn discloses tris(phenylpyridyl)iridium complexes wherein the phenyl groups of the ligand are substituted by terphenylene groups. The amended claims are therefore novel with respect to Burn. For the above reasons, this rejection should be withdrawn.

### **Rejections under 35 U.S.C. 103(a)**

Claims 1, 4, 5, 8-10, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi. Igarashi discloses in formula (3) in a very general way iridium complexes having one phenylpyridyl ligand, which can be substituted in any position of the phenyl ring and/or of the pyridyl ring with any substituent. These structures are not even complexes, but are only partial structures of complexes. Igarashi depicts several structures of iridium complexes. However, the structures 1-42 and 1-45 wherein the phenyl groups of the ligand are further substituted with phenyl groups meta to the position of the coordination to the iridium (positions 4 and 6) are the only structures of complexes having aromatic or heteroaromatic substituents. Therefore, only structures having phenyl substituents can be regarded as sufficiently disclosed by Igarashi.

In contrast, complexes substituted with a condensed aryl group or with a heteroaryl group cannot be regarded as sufficiently disclosed. Therefore, the person of ordinary skill in the art would never choose Igarashi as a starting point for his invention when working on complexes, which are substituted by condensed aryl groups or by heteroaryl groups. Therefore, complexes according to the present invention, which are substituted by condensed aryl groups or by heteroaryl groups, are inventive with respect to Igarashi.

Furthermore, as the applicant stated in their last response at page 10, the complexes according to the present invention having a phenyl substituent in the position para to the iridium have different properties compared to compounds having the phenyl substituent in the position meta to the iridium as disclosed by Igarashi.

The metal complexes as claimed in pending claim 1 differ from the metal complexes disclosed by Igarashi in that the phenyl substituent is bound para to the position of the coordination to the metal, i.e. in position 5. This has the effect that the emission maximum of these compounds is blue-shifted by about 25 nm compared to compounds where the phenyl group is bound meta to the position of the coordination of the iridium (see page 11 of the applicant's previous response).

The Examiner previously stated that the scope of the claims is commensurate with the evidence presented. The applicant has narrowed the claims, and believes that the claims are commensurate in scope with the showing. As discussed above, Igarashi should only be relevant for complexes, which are substituted with phenyl groups, but not for complexes, which are substituted with condensed aryl groups or with heteroaryl groups. The evidence, which the applicant previously submitted in reply to the last office action, should therefore be commensurate with the scope of the claims. For the above reasons, this rejection should be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

A one month extension of time has been paid. Applicant believes no additional fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 14113-00044-US from which the undersigned is authorized to draw.

Dated: March 17, 2010

Respectfully submitted,

Electronic signature: /Ashley I. Pezzner/  
Ashley I. Pezzner

Registration No.: 35,646  
CONNOLLY BOVE LODGE & HUTZ LLP  
1007 North Orange Street  
P. O. Box 2207  
Wilmington, Delaware 19899-2207  
(302) 658-9141  
(302) 658-5614 (Fax)  
Attorney for Applicant